



PATENT
51752/P849

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Rainford
Name

U.S. Patent No. :7,351,501 Confirmation No. 7997
Issued :April 1, 2008
Inventor(s) :Cheol-Soo Jung
Application No. :10/754,453
Filed :January 9, 2004
Title :ELECTROLYTE FOR RECHARGEABLE LITHIUM BATTERY AND
RECHARGEABLE LITHIUM BATTERY COMPRISING SAME

LETTER

Decisions & Certificates of Correction Branch
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Post Office Box 7068
Pasadena, CA 91109-7068
October 30, 2008

Dear Mr. Randall:

The October 1, 2008 decision regarding applicant's September 15, 2008 Request for Certificate of Correction refuses to enter the correction at col. 20, line 46, claim 13 on the grounds that the subject Patent is printed in accordance with the record and therefore there is no fault on the part of the Patent and Trademark Office.

However, applicant submits herewith a copy of the September 18, 2007 amendment, which clearly shows that the line to be inserted, namely --10cSt at 25°C, a cyclic carbonate, and a lithium salt wherein the polyether-modified silicon oil-- was contained in the amendment.

Certificate
NOV 05 2008
of Correction


NOV - 5 2008

U.S. Patent No. 7,351,501

Accordingly, this text was improperly deleted by the USPTO and it should properly be included in the Certificate of Correction. Reconsideration and correction of claim 13 in accordance with the attached Request for Certificate of Correction is requested.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By 
D. Bruce Prout
Reg. No. 20,958
626/795-9900

DBP/rjf

Enclosures: Copy of Sept. 18, 2007 Amendment
Copy of Sept. 15, 2008 Request for Certificate of Correction

RJF PAS821102.1-* -10/30/08 12:02 PM

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U.S. Postal Service as first class mail in an envelope addressed to:
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-
1450 on:
Sept. 15, 2008
(Date of Deposit)

PATENT
51752/P849

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

U.S. Patent No. : 7,351,501 Confirmation No. 7997
Issued : April 1, 2008
Inventor(s) : Cheol-Soo Jung
Application No. : 10/754,453
Filed : January 9, 2004
Title : ELECTROLYTE FOR RECHARGEABLE LITHIUM BATTERY AND
RECHARGEABLE LITHIUM BATTERY COMPRISING SAME

REQUEST FOR CERTIFICATE OF CORRECTION

Office of Certificates of Correction
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

P. O. Box 7068
Pasadena, CA 91109-7068
September 15, 2008

Commissioner:

Submitted herewith are two copies of a proposed Certificate of Correction for the above-referenced patent. The errors are identified in detail in the proposed certificate, and the corresponding text in the application is located as follows:

Location in Patent

Location in Application

PTO errors:

In the Claims

Column 20, line 1, Claim 5

Amendment dated September 18, 2007, pg. 3, Old
Claim 6, line 8

Column 20, line 46, Claim 13

Amendment dated September 18, 2007, pg. 5, Old
Claim 14, line 4

Applicant errors:

In the Claims

Column 20, line 58, Claim 16

Amendment dated September 18, 2007, pg. 5, Old
Claim 17, line 1

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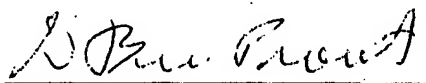
U.S. Patent No. 7,351,501

Applicant(s) errors were unintentional and inadvertent, and were made in good faith through oversight. Correction is accordingly requested under 35 U.S.C. § 255, and our check for the \$100 statutory fee is enclosed. Any deficiency or overpayment should be charged or credited to Deposit Account No. 03-1728. Please show our docket number with any credit or charge to our Deposit Account.

Correction of applicant(s) errors does not constitute new matter or require reexamination. Approval of this certificate is respectfully requested

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By 
D. Bruce Prout
Reg. No. 20,958
626/795-9900

DBP/rjf
Enclosures: Certificate of Correction (2)
Check \$100

RJF PAS812691.1-* -09/8/08 3:42 PM

NOV - 5 2008

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 7,351,501
APPLICATION NO.: 10/754,453
ISSUE DATE : April 1, 2008
INVENTOR(S) : Jung, Cheol-Soo

Page 1 of 1

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims

Column 20, line 1, Claim 5	Delete "carbonates", Insert --carbonate--
Column 20, line 46, Claim 13	After "than", Insert --10cSt at 25°C, a cyclic carbonate, and a lithium salt wherein the polyether-modified silicon oil--
Column 20, line 58, Claim 16	After "battery", Insert --of--

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Christie, Parker & Hale, LLP
P.O. Box 7068
Pasadena, California 91109-7068

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

PATENT NO. : 7,351,501
APPLICATION NO.: 10/754,453
ISSUE DATE : April 1, 2008
INVENTOR(S) : Jung, Cheol-Soo

Page 1 of 1

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims

Column 20, line 1, Claim 5	Delete "carbonates", Insert --carbonate--
Column 20, line 46, Claim 13	After "than", Insert --10cSt at 25°C, a cyclic carbonate, and a lithium salt wherein the polyether-modified silicon oil--
Column 20, line 58, Claim 16	After "battery", Insert --of--

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**Christle, Parker & Hale, LLP
P.O. Box 7068
Pasadena, California 91109-7068**

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
AMENDMENT TRANSMITTAL LETTER**

I hereby certify that this correspondence is being electronically filed with the United States Patent and Trademark Office on September 18, 2007 at or before 11:59 p.m. Pacific Time under the Rules of 37 CFR § 1.8.


Lisa D. Bronk

Applicant : Cheol-Soo Jung, et al. Confirmation No. 7997
Application No. : 10/754,453
Filed : January 9, 2004
Title : ELECTROLYTE FOR RECHARGEABLE LITHIUM BATTERY AND
RECHARGEABLE LITHIUM BATTERY COMPRISING SAME

Grp./Div. : 1745
Examiner : Angela J. Martin

Docket No. : 51752/P849

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Post Office Box 7068
Pasadena, CA 91109-7068
September 18, 2007

Commissioner:

Enclosed is an amendment to the above-identified application.

CLAIMS AS AMENDED						
	Claims Remaining After Amendment	Highest Number Paid For	Number Extra Claims	Small Entity Rate	Large Entity Rate	FEE
Total Claims Fee	16	*20	0	0 x \$25.00	0 x \$50.00	0
Independent Claims	4	** 4	0	0 x \$100.00	0 x \$200.00	0
Multiple Dependent Claims ***				\$180.00	\$360.00	0
TOTAL FILING FEE						0
NO ADDITIONAL FEE REQUIRED	IF NO FEE REQUIRED, INSERT "0"					0
LIST INDEPENDENT CLAIMS: 1, 6, 10 and 14						

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Amendment Transmittal Letter
Application No. 10/754,453

* IF HIGHEST NUMBER PREVIOUSLY PAID FOR IS 20 OR LESS, WRITE "20" IN COLUMN 3
** IF HIGHEST NUMBER PREVIOUSLY PAID FOR IS 3 OR LESS, WRITE "3" IN COLUMN 3
*** PAY THIS FEE ONLY WHEN MULTIPLE DEPENDENT CLAIMS ARE ADDED FOR THE FIRST TIME

_____ Attached is our check for \$ to pay the fees calculated above.
_____ A Petition for Extension of Time and the required fee are enclosed.
_____ Other enclosures:

The Commissioner is hereby authorized to charge any fees under 37 CFR 1.16 and 1.17 which may be required by or to give effect to this paper to Deposit Account No. 03-1728. Please show our docket number with any charge or credit to our Deposit Account.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By David A. Plumley
David A. Plumley
Reg. No. 37,208
626/795-9900

DAP/sc

SC PAS755885.1-*09/18/07 9:56 AM


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PATENT
RESPONSE UNDER 37 CFR 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 1745

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I hereby certify that this correspondence is being electronically filed with the United States Patent and Trademark Office on September 18, 2007 at or before 11:59 p.m. Pacific Time under the Rules of 37 CFR § 1.8.



Lisa D. Bronk

Appl No. : 10/754,453 Confirmation No. 7997
Applicant : Cheol-Soo Jung, et al.
Filed : January 9, 2004
Title : ELECTROLYTE FOR RECHARGEABLE LITHIUM BATTERY AND
RECHARGEABLE LITHIUM BATTERY COMPRISING SAME
TC/A.U. : 1745
Examiner : Angela J. Martin
Docket No. : 51752/P849
Customer No. : 23363

AMENDMENT AFTER FINAL ACTION

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Post Office Box 7068
Pasadena, CA 91109-7068
September 18, 2007

Commissioner:

In response to the Office action of July 18, 2007, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 6 of this paper.

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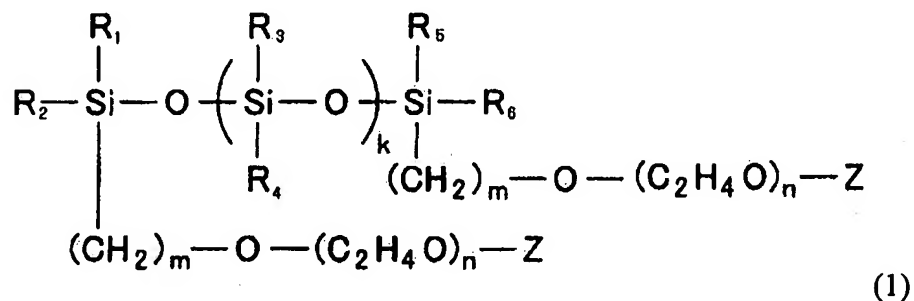
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please amend claims 1, 6, 10 and 14, and cancel claim 2.

1. (Currently Amended) A non-aqueous electrolyte comprising:
a cyclic carbonate;
a lithium salt; and
a polyether-modified silicon oil represented by formula 1 in which a polyether chain is bonded to a terminal end of a linear polysiloxane chain, the polyether-modified silicon oil having a viscosity of less than 10cSt at 25°C:



where k is an integer from 0 to 10;

m is a natural number from 2 to 4;

n is a natural number from 1 to 4;

R₁ to R₇ are independently or identically, selected from hydrogen or C₁ to C₅ alkyls; and

Z is CH₃ or C₂H₅.

2. (Canceled).

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3. (Original) The electrolyte of claim 1, wherein the polyether-modified silicon oil has a flash point of 120°C or more.

4. (Original) The electrolyte of claim 1 further comprising a chain carbonate.

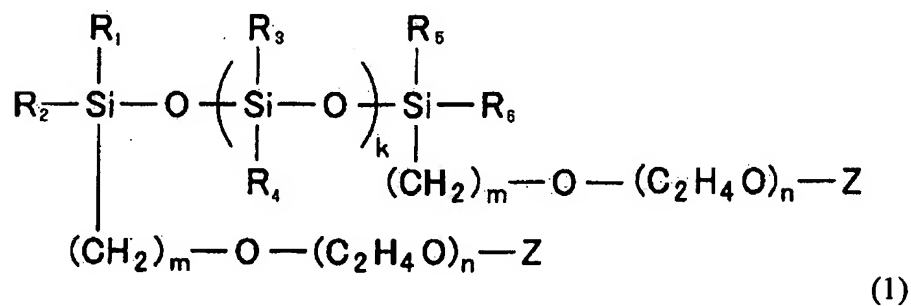
5. (Original) The electrolyte of claim 1 further comprising a fluorinated cyclic carbonate.

6. (Currently Amended) A rechargeable lithium battery comprising:
a positive electrode;
a negative electrode; and
a non-aqueous electrolyte comprising:

_____ a polyether-modified silicon oil represented by formula 1 in which a polyether chain is bonded to a terminal end of a linear polysiloxane chain, the polyether-modified silicon oil having a viscosity of less than 10cSt at 25°C,

_____ a cyclic carbonate, and

_____ a lithium salt:



where k is an integer from 0 to 10;
m is a natural number from 2 to 4;
n is a natural number from 1 to 4;

R_1 to R_7 are independently or identically, selected from hydrogen or C_1 to C_5 alkyls; and
 Z is CH_3 or C_2H_5 .

7. (Original) The rechargeable lithium battery of claim 6, wherein the negative electrode comprises a thin layer comprising a compound selected from the group consisting of polyacrylate compounds, aziridine compounds, fluorinated cyclic carbonates and mixtures thereof.

8. (Original) The rechargeable lithium battery of claim 6, wherein the non-aqueous electrolyte further comprises a chain carbonate.

9. (Original) The rechargeable lithium battery claim 6, wherein the non-aqueous electrolyte further comprises a fluorinated cyclic carbonate.

10. (Currently Amended) An electrolyte for a rechargeable lithium battery comprising:

a polyether-modified silicon oil having a viscosity of less than 10cSt at 25°C, a cyclic carbonate, and a lithium salt, wherein the polyether-modified silicon oil includes end silicons, wherein each end Si atom includes a terminal bond to a polyether group.

11. (Original) The electrolyte of claim 10, wherein the polyether-modified silicon oil has a flash point of 120°C or more.

12. (Original) The electrolyte of claim 10 further comprising a chain carbonate.

13. (Original) The electrolyte of claim 10 further comprising a fluorinated cyclic carbonate.

14. (Currently Amended) A rechargeable lithium battery comprising:

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Appln No. 10/754,453
Amdt date September 18, 2007
Reply to Office action of July 18, 2007

a positive electrode;
a negative electrode; and
an electrolyte comprising a polyether-modified silicon oil having a viscosity of less than 10cSt at 25°C, a cyclic carbonate, and a lithium salt wherein the polyether-modified silicon oil includes end silicons with terminal bonds consisting of Si-C or Si-H bonds and wherein each end Si atom includes a terminal bond to a polyether group.

15. (Original) The rechargeable lithium battery of claim 14, wherein the negative electrode comprises a thin layer comprising a compound selected from the group consisting of polyacrylate compounds, aziridine compounds, and fluorinated cyclic carbonates, or a combination thereof on a surface thereof.

16. (Original) The rechargeable lithium battery of claim 14, wherein the electrolyte further comprises a chain carbonate.

17. (Original) The rechargeable lithium battery claim 14, wherein the electrolyte further comprises a fluorinated cyclic carbonate.

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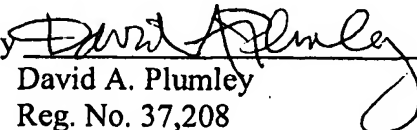
Appln No. 10/754,453
Amdt date September 18, 2007
Reply to Office action of July 18, 2007

REMARKS/ARGUMENTS

In the Final Rejection dated July 18, 2007, the examiner rejected claims 1-17 under 35 U.S.C. §103(a) as allegedly obvious over Horie (JP 2003-142157). However, applicant has amended independent claims 1, 6, 10 and 14 to recite that the polyether modified silicon oil has a viscosity of less than 10cSt at 25°C. Horie fails to teach or suggest such a feature. Despite the examiner's assertion to the contrary, Horie does disclose a viscosity for the siloxane derivatives, i.e. a viscosity of 5000cSt at 25°C. See paragraph 0019. In contrast, independent claims 1, 6, 10 and 14 recite a viscosity of less than 10cSt at 25°C. The viscosity recited in the present claims helps to actively move lithium ions, thereby preventing fading of lithium ion conductivity. Given the drastic differences in viscosity between the compounds disclosed in Horie and those recited in the present claims, independent claims 1, 6, 10 and 14 are not obvious over Horie. Remaining claims 2-5, 2-9, 11-13 and 15-17 depend from one of independent claims 1, 6, 10 and 14, and are therefore also allowable over Horie.

Claims 1 and 3-17 remain pending in this application. By this amendment, applicant has amended claims 1, 6, 10 and 14, and has canceled claim 2. In view of the above amendments and remarks, applicant submits that all of pending claims 1 and 3-17 are in condition for allowance. Applicant therefore respectfully requests a timely indication of allowance. However, if there are any remaining issues that can be addressed by telephone, applicant invites the examiner to contact applicant's counsel at the number indicated below.

Respectfully submitted,
CHRISTIE, PARKER & HALE, LLP

By 
David A. Plumley
Reg. No. 37,208
626/795-9900

LES/les

SC PAS750773.1.*-09/18/07 9:57 AM

NOV - 5 2008

Acknowledgement Receipt

The USPTO has received your submission at **18:19:03** Eastern Time on **18-SEP-2007**.

No fees have been paid for this submission. Please remember to pay any required fees on time to prevent abandonment of your application.

eFiled Application Information

EFS ID	2210784
Application Number	10754453
Confirmation Number	7997
Title	Electrolyte for rechargeable lithium battery and rechargeable lithium battery comprising same
First Named Inventor	Cheol-Soo Jung
Customer Number or Correspondence Address	23363
Filed By	David A. Plumley/Lisa Bronk
Attorney Docket Number	51752/P849
Filing Date	09-JAN-2004
Receipt Date	18-SEP-2007
Application Type	Utility under 35 USC 111 (a)

Application Details

Submitted Files	Page Count	Document Description	File Size	Warnings
AMENDTRANS.pdf	2	Miscellaneous Incoming Letter	53872 bytes	◆ PASS
AMENDAF.pdf	6		164372 bytes	◆ PASS
		Document Description	Page Start	Page End
		Amendment After Final	1	1
		Claims	2	5
		Applicant Arguments/Remarks Made in an Amendment	6	6

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance

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of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security; and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

If you need help:

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- *Send general questions about USPTO programs to the [USPTO Contact Center \(UCC\)](#).*
- *If you experience technical difficulties or problems with this application, please report them via e-mail to [Electronic Business Support](#) or call 1 800-786-9199.*

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